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ABSTRACT

In this study, a classroom observation technique was employed to examine the behaviors of a group of teacher-referred hyperactive children in order to determine the frequency of specific behaviors exhibited. The purpose behind the study was the further investigation of behavioral observation and intervention techniques used by other researchers as alternatives to prolonged medication therapy for hyperactive children. Subjects were 11 elementary school children in grades K through 2. The control group consisted of all classroom peers who, by virtue of their non-referral, were identified as not hyperactive. Subjects and controls were observed in the classroom and their behaviors charted using a time sampling procedure that recorded behavior frequency of 19 categories of behavior. Significant differences were found between groups on behaviors in seven categories: approval, volunteers, initiation to teacher, physical negative, play, inappropriate locale, and self-stimulation. In all of these categories, except volunteers, the control group had lower frequencies of occurrence. Having delineated the specific types of behavior that the hyperactive children engaged in more frequently, the authors suggested a behavioral intervention program be implemented to decrease or extinguish targeted behaviors. (Author/SB)

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BEHAVIORS OF CHILDREN REFERRED BY CLASSROOM TEACHERS AS HYPERACTIVE

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INTRODUCTION

The hyperactive syndrome is a combination of symptoms, which while not abnormal in and of themselves, are abnormal when displayed excessively. These symptoms include such things as excessive physical activity, attention difficulties, impulsivity, distractibility, and accompanying social and emotional problems. In recent years the use of the term "hyperactive" has been applied to many children exhibiting behavior problems in the schools.

Literature concerning the control of hyperactive behavior indicates that in the last fifteen years, stimulant drugs have emerged as the treatment of choice. Children given stimulant drugs were rated by their teachers as more improved on measures relating to negative classroom behaviors than were control subjects in a study by Conners, Eisenberg, and Barcai (1967). There was evidence to suggest that the frequency of drug treatment was increasing (Safer, 1971). Krippner, Silverman, Cavallo, and Healy, (1973), estimated that at least 200,000 children were receiving such drugs in the United States for hyperactivity.

Many of the hyperactive children placed on stimulants remain under treatment for months and often years. Concern has been raised about the lack of objective long-term research on the effects of these drugs in children (Sroufe, 1973). It has been reported that physicians sometimes prescribe these medications without seeing the child at all, or following a single brief interview with the mother and child (Browder, 1972).

The role of the schools in the diagnosis and treatment of hyperactivity becomes a focus of attention in light of the realization that they may be exerting pressure on parents to place their children on drugs. Sroufe (1973) cited sources documenting school personnel putting direct pressure on parents to seek

medication by making school attendance contingent upon such treatment. Stewart and Olds (1973) found that 60 percent of the parents in their sample reported that medication had been suggested by school officials. Steinberg (1971) stated that 64 percent of the parents of a group of behavior problem children were willing to allow them to be placed in a "drug study" even though there had been no previous psychiatric referral and there had been no initial evaluation by any medical personnel.

Jones, Loney, Weissenburger, and Fleischmann (1975) collected data on children referred by teachers as hyperactive and compared their off-task behavior with children who were clinically diagnosed as hyperactive using a classroom observation system. They found little differences in off-task behavior between the teacher-referred children and those clinically identified. Kenny, Clemmens, Hudson, Lens, Gicci, and Nair (1975) had contradictory findings. They conducted medical and psychological evaluations of children referred to a clinic because of hyperactivity and found that out of a hundred chldren, only 13 were rated by a consensus of the staff as hyperactive. Among the conclusions of these authors was the statement that hyperactivity was an ill-defined and inconsistent phenomenon.

Allyon, Layman, and Kandel (1975) used an alternative behavioral-educational treatment for the control of hyperactivity. Six children receiving stimulants were withdrawn from the medication and the percentage of appropriate and inappropriate behaviors they exhibited was observed and coded. Systematic behavioral interventions were then introduced, involving token reinforcements for appropriate behavior. The authors found that upon discontinuation of the medication, the levels of hyperactivity rose considerably, but the behavioral interventions were able to reduce it to pre-withdrawl levels. Similar results have been reported by Litzenberger (personal communication, November, 1975).

As concern over the yet undetermined effects of prolonged medication therapy for hyperactive children mounts, and as the recent work of Allyon et. al, Jones et. al, and Litzenberger, demonstrated the potential efficacy of behavioral observation and intervention techniques, it seems imperative that such techniques be further experimented with and refined. The study reported here examined the behaviors of a group of children referred by their teachers as hyperactive. A classroom observation technique was employed with the intent of delineating and determining the frequency of specific behaviors exhibited.

METHOD

Subjects and Setting

The subjects for this study were 11 elementary school children in grades K-2 who were referred to the school psychologist by their classroom teacher as hyperactive. None were currently receiving medication to control their behavior. The children attended a public elementary school, and were enrolled in regular classrooms having one teacher and approximately 25 peers. The control group consisted of all peers in the classroom, who by virtue of their non-referral had been identified as not hyperactive.

Behavioral Categories

The subjects and controls were observed and their behavior charted using a system developed by Cobb and Ray (1972). Nineteen coded definitions for observable behaviors in the classroom were listed. These behaviors were as follows: Approval, Compliance, Appropriate Talk With Teacher, Appropriate Interaction With Peer, Volunteers, Initiation to Teacher, Attending, Physical Negative, Destructiveness, Dissapproval, Noisy, Noncompliance, Play, Inappropriate Talk With Teacher, Inappropriate Interaction With Peer, Inappropriate Locale, Self-stimulation, Looking Around, and Not Attending.

Procedure

The children were observed by one observer seated at the side of the classroom so as to clearly see the target children, but not disturb the normal proceedings. The investigators observed one subject child and his/her classroom peers per session for a period of four days. A time sampling procedure was employed, using a stopwatch.

The observer looked at the subject (hyperactive) child for a 10 second period, at the end of which s/he allowed a two second period in which the behavior was coded on a charting sheet. S/he then observed the first peer for 10 seconds, recorded the behavior, back to the subject, record, on to second peer, record, etc., until a total of 100 observations were completed for each daily session...alternating the subject child and peers in order of seating arrangement around the room. This allowed for a random sampling of peer behavior and a specific sampling of subject behavior.

The classroom observation procedure was conducted during a structured academic activity period in each schoolroom. Only one behavior was coded for each 10 second period. To facilitate a consistent choice of categories the codes were ordered on the coding sheet from left to right. The observer went from left to right until the first appropriate category was reached and then marked that category only.

Design

Subjects were assigned to the experimental or control condition based upon teacher referral for hyperactivity. Time sampling was used to determine the observed behavior frequency of 19 categories of behavior. Observations were conducted over a four day period with the total number of observations being 200 per subject (50 per day; four days). Data derived from these observations were analysed using a series of t-tests of significant differences between the means of independent samples (Ferguson, 1971) to compare the

subjects with the controls. The one-tailed null hypothesis was $H_0: u_1 \not> u_2$; the experimental hypothesis was: $H_1: u_1 > u_2$. The assigned level of significance was set at the .05 level with 20 degrees of freedom.

Results

Significant differences (.05 level) were found between groups on the following behaviors: Approval, Volunteers, Initiation to Teacher, Physical Negative, Play, Inappropriate Locale, and Self-stimulation. In only one case, that of the behavioral category Volunteers, was the control group frequency of occurrence higher than that of the subjects. In all of the remaining significant comparisons, the subjects displayed higher frequencies than the controls. No significant differences in frequency of occurrence were found between the groups on the following behavioral categories: Compliance, Appropriate Talk With Teacher, Appropriate Interaction With Peer, Attending, Destructiveness, Disapproval, Noisy, Noncompliance, Inappropriate Talk With Teacher, Inappropriate Interaction With Peer, Looking Around, and Not Attending.

DISCUSSION

Significant differences did occur between the frequency of occurrence of certain behaviors in the children referred as hyperactive and their classroom peer controls. With the exception of the category Approval and possibly Initiation to Teacher, these behaviors which the hyperactive group exhibited at a higher frequency than their peers can be labeled inappropriate or undesireable to the conduct of a structured academic classroom activity. The undesireable behaviors that the hyperactive subject children displayed apparently dominated their teachers' impressions of them, resulting in referral to the school psychologist. Having delineated the specific types of behavior that the hyperactive children engage in more frequently, a behavioral intervention program can be

implemented to decrease or extinguish targeted behavior(s) (Allyon, et. al), (Jones et. al), (Litzenberger).

Further research is needed which can include a larger number of subjects and a greater diversity of settings. Follow-up and long-term studies of teacher referred hyperactive children and the results of behavioral-educational treatments would be valuable. Additional work should consider the dimensions of classroom structure and teacher expectations, as well as comparisons between individual children in the experimental group.

ABSTRACT

Teacher referred hyperactive children showed higher frequencies of occurrence of six of 19 observed classroom behaviors. A classroom observation technique was applied to the delineation of specific behaviors which the hyperactive displayed. Behavioral-educational alternatives to medication for these children were suggested.

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